

## U.S. DOE Laboratory Accreditation Program

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### Abstract

Radiological and Environmental Sciences Laboratory (RESL) is a federally owned laboratory operated by federal employees of the United States Department of Energy's Idaho Operations Office (USDOE-ID) in Idaho Falls, ID. RESL is recognized as a scientifically and technically excellent DOE Reference Laboratory. It has Broad scope of technical capabilities in radiation measurements, proficiency testing and analytical chemistry; and Innovation in applying state-of-the-art technologies. RESL, having achieved outside accreditation based on ISO/IEC 17025 lab standard and ISO/IEC 43 standard has shown tremendous quality system improvements.

The DOE Laboratory Accreditation Program (DOELAP) is a DOE complex-wide safety program that ensures the quality of worker radiation protection programs. Title 10 Code of Federal Regulations 835 (of US laws) requires that personnel Dosimetry and Radiobioassay programs be tested and accredited. RESL is the Performance Testing Laboratory for DOELAP. Dosimetry and Radiobioassay laboratories are sent (1) Dosimeters with known doses (2) synthetic urine and fecal samples with added radionuclides for laboratory analysis, and (3) whole body and human torso phantoms along with Lungs and Thyroid phantoms with added radionuclides for analysis in counting vaults routinely used at USDOE sites. Results are compared to requirements in performance test standards, and are used in the accreditation process along with on-site assessment of the entire program based on DOE and ANSI standards. RESL is the only federal reference laboratory to National Institute of Standards and Technology (NIST). RESL has been a radiological reference laboratory for the US Nuclear Regulatory Commission (NRC) for over three decades.

RESL would like to extend it's services to international laboratories to achieve confident radiation protection for the radiation workers and the society.